

STIFFLER MCGRAW
ENGINEERS • SURVEYORS • ARCHITECTS

ANNUAL RESERVOIR INSPECTION

EBENSBURG STORAGE DAM

DEP ID No. D11-061

EBENSBURG BOROUGH, CAMBRIA COUNTY,
PENNSYLVANIA

OWNER: EBENSBURG BOROUGH

OCTOBER, 2015

STIFFLER-MCGRAW.COM

November 16, 2015

TEL: 814.696.6280
FAX: 814.696.6240

Mr. Dan Penatzer
Borough Manager
Ebensburg Borough
300 W. High Street
Ebensburg, PA 15931

RE: 2015 Inspection of Ebensburg Storage Dam
DEP File No. 011-061
Project No. 15-0017.101

Dear Mr. Penatzer:

Stiffler, McGraw & Associates (SMA) has completed the 2015 annual dam safety inspection of the above referenced dam. We've attached four copies of the inspection report – two copies for your records and two for submission to the PA Department of Environmental Protection (PA DEP). The copies sent to PA DEP should be addressed to:

Brandon S. Frey, E.I.T.
Western Section – Division of Dam Safety
PADEP
Rachel Carson Building
P.O. Box 8554
Harrisburg, PA 17105-8554

In summary, the dam appeared to be in good condition. However, the following observations should be noted and addressed by Ebensburg staff:

1. Vegetative cover on the dam crest and embankment was well maintained. However, an area along the left abutment should be cleared of woody growth (See Photo 9). This was also addressed in last year's report.
2. The biggest concern with this dam is the outlet works. According to the Public Works director:
 - a. No valve or gate exists within the inlet structure.
 - b. The drain valve located within a manhole near the entrance to the water treatment plant was opened last year, but much difficulty was encountered when attempting to close it. For this reason, the valve was not exercised this year.
 - c. The 20" ± drain pipe outlets into Howell's Run, but is submerged.
 - d. The pipe network is made up of several different materials.

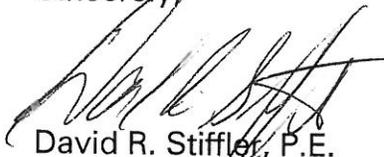
Mr. Dan Penatzer
RE: 2015 Inspection of Howell's Run Dam
November 16, 2015
Page Two

It is obvious that the outlet work is in need of attention. Since the pipe outlet is submerged and no other access to the network is available, the dam will need to be drained just to televise and inspect the conduit. The Borough is currently looking at options to improve operations at the water treatment plant which is located adjacent and just downstream of the Dam. Because of this, we suggest that work related to improvements to the dam's outlet works be combined with the potential improvements of the treatment plant. This would include the drawdown of the dam. During the next several months, we will work with Borough officials to develop a plan that addresses both issues.

Please note that the "Dam Owner Notice Checklist", page 9 of the inspection forms needs completed. I've notified Jeff Evans of this also.

If you should have any questions, please contact our office.

Sincerely,



David R. Stifflet, P.E.
Senior Project Engineer

Enclosures

DAM INSPECTION CHECKLIST
Department of Environmental Protection
Bureau of Waterways Engineering
Division of Dam Safety

NAME OF DAM: Ebensburg Storage Dam

DEP DAM NO.: D11-061

LOCATION: Municipality: Ebensburg Borough

County: Cambria

DEP CLASSIFICATION DATA: Size: C

Hazard: 1

PHYSICAL DATA:

Type of Dam: Earth Fill

Height of Dam: 17.5'

Normal Pool Storage Capacity: 48 Ac-Ft

ELEVATIONS:

Normal Pool: 1983.30

Pool at Inspection: 1983.32

Tailwater at Inspection:

DAM OWNER: Ebensburg Borough

OPERATOR: Jeff Evans

ADDRESS: 300 West High Street
Ebensburg, PA 15931

Public Works Director
Ebensburg Borough

PHONE: (814) 472-8750

FAX NO.:

E-MAIL ADDRESS: jevans@ebensburgpa.com

A completed and signed Dam Owners Notice Checklist is to accompany this Inspection Checklist.

PERSONS PRESENT AT INSPECTION:

<u>Name</u>	<u>Title/Position</u>	<u>Representing</u>
<u>David R. Stiffler, P.E.</u>	<u>Sr. Project Engineer</u>	<u>Stiffler, McGraw & Assoc.</u>
<u>Roger A. Foor</u>	<u>Construction Manager</u>	<u>Stiffler, McGraw & Assoc.</u>
_____	_____	_____
_____	_____	_____

DATE OF INSPECTION: 10/29/2015

WEATHER: Clear

TEMPERATURE: 48°



This is to certify that the above dam has been inspected and the following are the results of this inspection.

[Handwritten Signature]

 Signature of Registered Professional Engineer
 (P.E. Seal Required)

11/12/15

 Date

ITEM	CONDITION	COMMENTS	MONITOR	INVESTIGATE	REPAIR
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EMBANKMENT: CREST

1	Surface Cracking	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Sinkhole, Animal Burrow	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Low Area(s)	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Horizontal Alignment	No problems noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Ruts and/or Puddles	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Vegetation Condition	Good cover of grass, well maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Warning Signs	None Observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments (Refer to item number if applicable):

EMBANKMENT: UPSTREAM FACE

10	Slide, Slough, Scarp	None Observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Slope Protection	Concrete in good condition, to approximately 3' below spillway crest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Sinkhole, Animal Burrow	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Emb.-Abut. Contact	No problems noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Erosion	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Vegetation Condition	Good cover of grass, well maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments (Refer to item number if applicable):

ITEM	CONDITION	COMMENTS	MONITOR	INVESTIGATE	REPAIR
EMBANKMENT: DOWNSTREAM FACE					
18	Wet Area(s) (No Flow)	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	Seepage	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20	Slide, Slough, Scarp	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	Emb. - Abut. Contact	No problems noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	Sinkhole, Animal Burrow	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	Erosion	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	Unusual Movement	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	Vegetation Control	Good cover of grass, well maintained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable): The vegetation above the abandoned in place UST structures remains in good condition.					
22. See Sketch Plan					
EMBANKMENT: INSTRUMENTATION					
28	Piezometers/Observ. Wells	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	Staff Gauge and Recorder	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30	Weirs	Stream flow monitor installed November 1994 for Howell's Run Conservation Release Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	Survey Monuments	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	Drains	Not observed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33	Low Flow Release	The low flow release from Howells Run Dam is discharged from a six inch diameter pipe onto the emergency spillway, when there is not water running in the spillway	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	Frequency of Readings	The low flow release is continuously monitored	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35	Location of Records	Water treatment facility data storage unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Comments (Refer to item number if applicable):					

ITEM	CONDITION	COMMENTS	MONITOR	INVESTIGATE	REPAIR
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SPILLWAYS: NON-ERODABLE CHANNEL N/A

56	Sidewalls	Fair condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57	Channel Floor	Fair condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58	Unusual Movement	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59	Approach Area	Vegetation along the left abutment of the spillway should be removed. See Photo 9.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
60	Weir or Control	Good condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
61	Discharge Channel	No problems noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
62	Boils	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
63			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
64			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments (Refer to item number if applicable):

SPILLWAYS: DROP INLET / N/A

65	Intake Structure	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
66	Trashrack	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
67	Stilling Basin	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
68			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
69			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments (Refer to item number if applicable):

ITEM	CONDITION	COMMENTS	MONITOR	INVESTIGATE	REPAIR
OUTLET WORKS					
70	Intake Structure	Replaced in 1994. The intake structure appears to be in good condition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
71	Trashrack	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
72	Stilling Basin	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
73	Primary Closure	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
74	Secondary Closure	This valve is located in a manhole near the (See below)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
75	Control Mechanism	Replaced in 1994	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
76	Outlet Pipe	Did not observe, but based upon previous (See below)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
77	Outlet Tower	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
78	Outlet Structure	Submerged	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
79	Seepage	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80	Unusual Movement	None noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
81			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
82			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments (Refer to item number if applicable):

74. entrance to the water treatment plant. (See Photo 14). According to the dam owner, the valve was operated a year or so ago, but issues were encountered during efforts to close and seal the valve. The entire closure and drain pipe system is in need of an upgrade. The drain outlet is submerged within the channel of Howells Run downstream of the water treatment plant.

76. inspection reports and conversations with the owner, the pipe and outlet configuration should be the subject of further investigation.

CONCRETE/MASONRY DAMS: UPSTREAM FACE N/A

83	Surface Conditions	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
84	Condition of Joints	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
85	Unusual Movement	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
86	Abutment-Dam Contacts	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
87			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
88			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments (Refer to item number if applicable):

ITEM	CONDITION	COMMENTS	MONITOR	INVESTIGATE	REPAIR
CONCRETE/MASONRY DAMS: DOWNSTREAM FACE N/A					
89	Surface Conditions	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90	Condition of Joints	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
91	Unusual Movement	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
92	Abutment-Dam Contacts	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
93	Drains	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
94	Leakage	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
95			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
96			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments (Refer to item number if applicable):

CONCRETE/MASONRY DAMS: CREST N/A

97	Surface Conditions	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
98	Horizontal Alignment	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
99	Vertical Alignment	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100	Condition of Joints	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
101	Unusual Movements	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
102			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
103			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments (Refer to item number if applicable):

ITEM	CONDITION	COMMENTS	MONITOR	INVESTIGATE	REPAIR
RESERVOIR AREA					
104	Sedimentation	No problems noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
105	Slope Stability	No problems noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
106	Sinkholes	No problems noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
107	Fractures	No problems noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
108	Unwanted Growth	No problems noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
109	Storage Gage	No problems noted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
110			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
111			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments (Refer to item number if applicable):

Final Comments:

DAM OWNERS NOTICE CHECKLIST
Department of Environmental Protection
Bureau of Waterways Engineering
Division of Dam Safety

NAME OF DAM: Ebensburg Storage Dam **DEP DAM NO.:** D11-061

This is to certify that both the Downstream Hazard Description is accurate and the Posted Notice locations listed below have been inspected and the following are the results of these inspections.

Ebensburg Municipal Authority *[Signature]* 11/18/2015
 Name of Dam Owner Signature of Dam Owner Date

This Dam Owners Notice Checklist is to accompany the Inspection Checklist filed by the Engineer.

EMERGENCY ACTION PLAN

Date of Last Update of Emergency Plan: July 2011

Downstream Hazard Description (Refer to sections II.C and II.D in the EAP), additionally, specify any new developments, structures, etc. downstream within the inundation area: Within the inundation area there are approximately 11 homes, 10 commercial businesses, one water treatment plant, one sewage treatment plant, one baseball field, and one public swimming pool.

POSTED NOTICES (Refer to section V.A in the EAP)

ITEM	DATE INSPECTED	LOCATION	COMMENTS	EXISTING	MISSING	REPLACED
1	11/18/15	Cambria County EMA		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	11/18/15	Cambria Township EMO		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	11/18/15	Ebensburg Boro. EMO		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	11/18/15	Munster Twp EMO		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	11/18/15	Portage Twp EMO		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	11/18/15	Summerhill Twp EMO		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	11/18/15	Ebensburg Boro. Municipal Bldg Dam Reservoir Manager's Office		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	11/18/15	Central Cambria Zone EMA		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Comments (Refer to item number if applicable):

SKETCH PLAN

PHOTOGRAPHS

DEP ID NO D11-061
EBENSBURG STORAGE DAM
Ebensburg, Pennsylvania

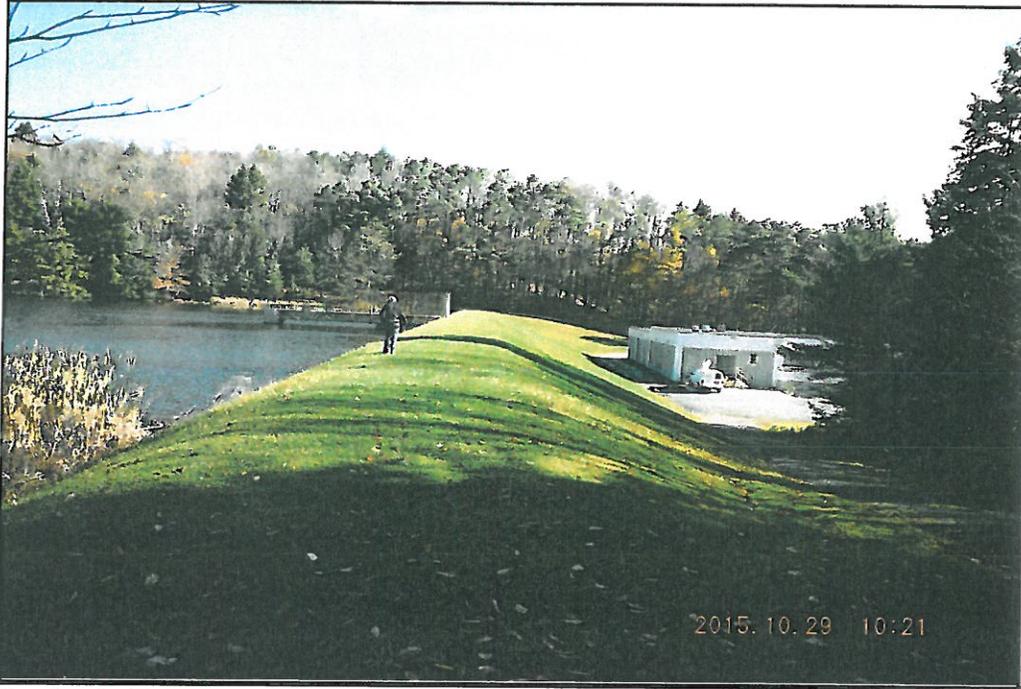


Photo 1: Downstream Embankment and Crest looking Northeast



Photo 2: Upstream Embankment looking Northeast

DEP ID NO D11-061
EBENSBURG STORAGE DAM
Ebensburg, Pennsylvania

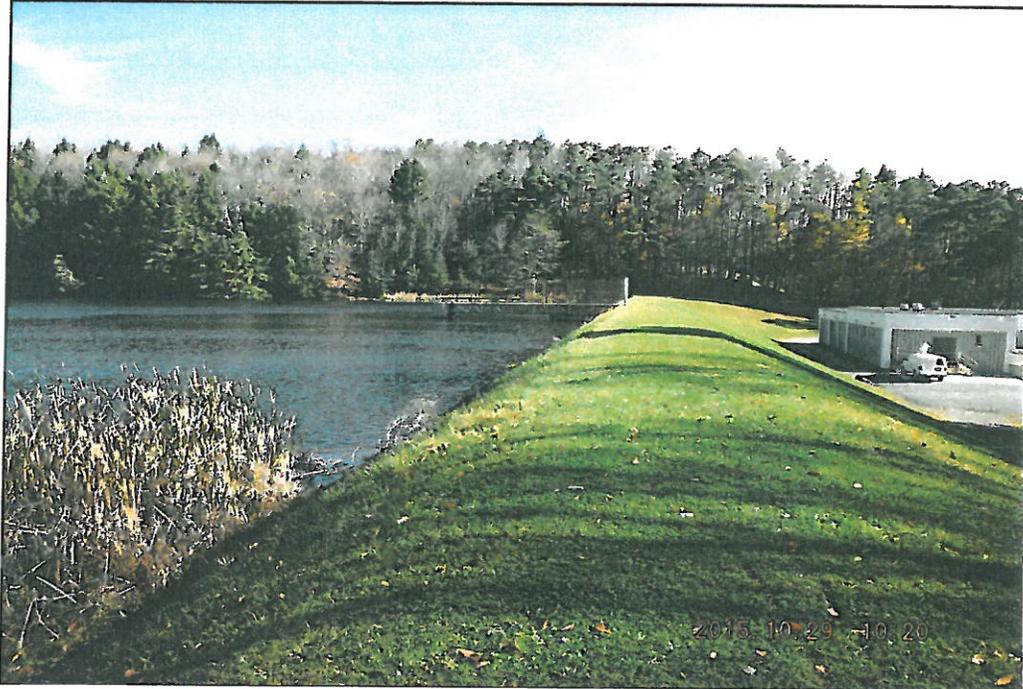


Photo 3: Crest looking Northeast



Photo 4: Intake Structure, Bridge and Gated Access

DEP ID NO D11-061
EBENSBURG STORAGE DAM
Ebensburg, Pennsylvania

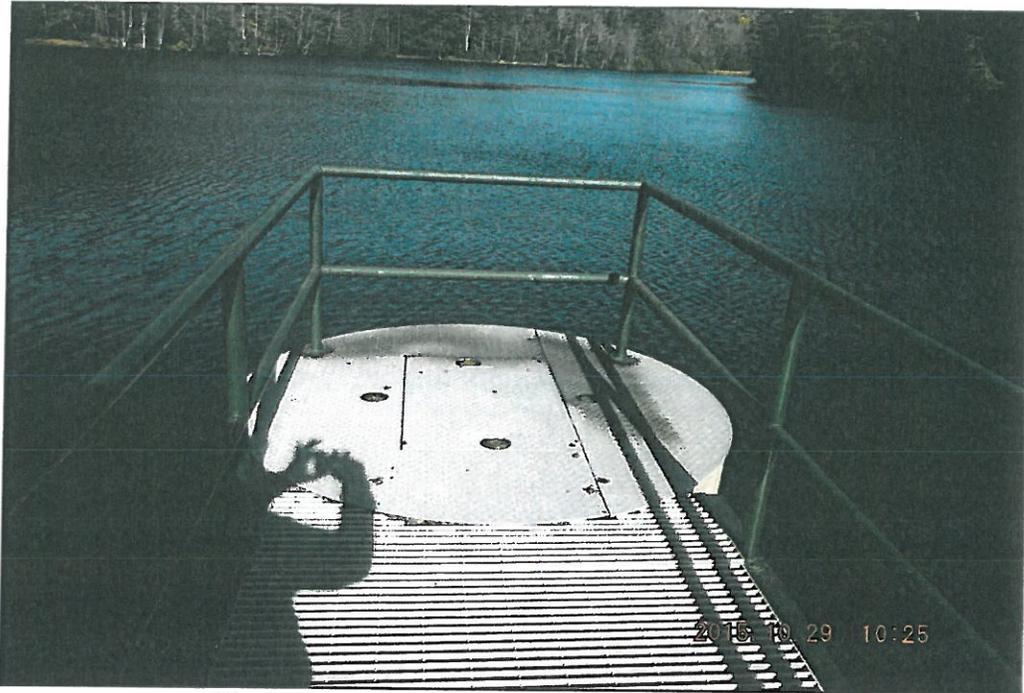


Photo 5: View of Intake Structure Top



Photo 6: Crest from the Middle looking Southwest

DEP ID NO D11-061
EBENSBURG STORAGE DAM
Ebensburg, Pennsylvania



Photo 7: Crest from the Middle looking Northeast



Photo 8: Spillway Control Section looking Northeast

DEP ID NO D11-061
EBENSBURG STORAGE DAM
Ebensburg, Pennsylvania



Photo 9: Woody Vegetation at Left Abutment

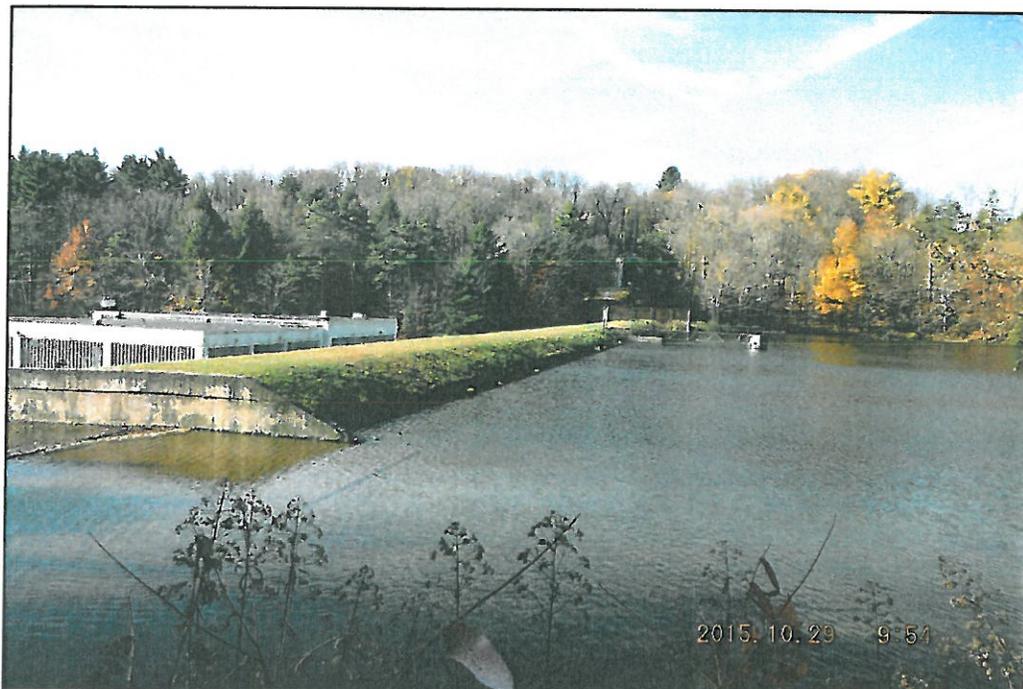


Photo 10: Spillway Entrance and Upstream Embankment looking Southwest

DEP ID NO D11-061
EBENSBURG STORAGE DAM
Ebensburg, Pennsylvania

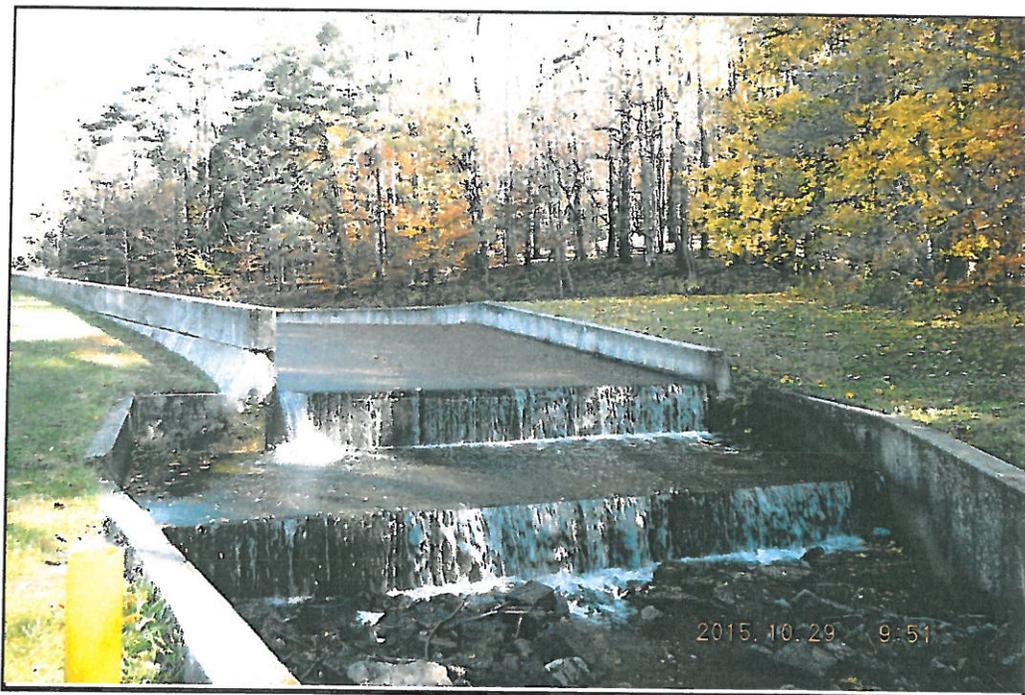


Photo 11: Downstream Section of Spillway



Photo 12: View of Weir on Discharge Channel Used for Measuring Conservation Release

DEP ID NO D11-061
EBENSBURG STORAGE DAM
Ebensburg, Pennsylvania



Photo 13: View of Submerged Reservoir Drain Outlet



Photo 14: View of Reservoir Drain Valve Manhole

**DEP REVIEW LETTER
FOR
2014 INSPECTION REPORT**



April 30, 2015

Daniel L. Penatzer, Manager
Ebensburg Borough
300 West High Street
Ebensburg, PA 15931

Re: 2014 Annual Inspection Report
Ebensburg Storage Dam
DEP File No. D11-061

Dear Mr. Penatzer:

The 2014 Annual Inspection Report for the Ebensburg Storage Dam was submitted by L. Robert Kimball & Associates, Inc. on December 11, 2014. We thank the Borough for its cooperation with the DEP Dam Safety Program and for conducting the 2014 Annual Inspection.

We have reviewed the inspection report and concur with the recommendations explained in it. Please be advised that repairs other than minor maintenance will likely require written approval from the Department prior to performing any work. Minor maintenance includes activities such as vegetation and debris removal, filling of animal burrows, and patching or sealing of small areas. *The results of any repair or maintenance work should be documented by the Borough's engineer in the 2015 Annual Inspection Report.*

It was noted that the drawdown valves were not tested during this inspection. While it is not required as part of this inspection, drawdown valves should be exercised at least twice yearly to ensure that they are in proper working order.

Included with the Annual Inspection Report is the Dam Owner's Notice Checklist. However, it was not completed and signed or dated by the dam owner or owner's representative. Please complete this checklist and resubmit this page to our office.

A review of our files shows that a close inspection of the outlet or drawdown conduit, appurtenant gates, or valves might not have been conducted since the dam was built. In consideration of the age of this structure and the frequent occurrence of problems encountered with outlet systems for other older dams in Pennsylvania, we request that the Authority direct its engineer to conduct a detailed inspection of the dam's outlet/drawdown system. The inspection should include the conduit, appurtenant gates or valves, and structures. We strongly suggest that the Authority's engineer contact this office to discuss the technical requirements of the inspection. A detailed report of this inspection, including video, should be submitted with the 2015 Annual Inspection Report.

Daniel L. Penatzer, Manager
Ebensburg Borough

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April 30, 2015

DEP appreciates both this opportunity to review the operation of the Ebensburg Storage Dam, and the cooperation extended by Ebensburg Borough and its engineer. If you have any questions regarding this letter, please contact me by email at brfrey@pa.gov or by telephone at 717.772.1680.

Sincerely,

A handwritten signature in black ink, appearing to read "Brandon S. Frey". The signature is written in a cursive style with a large, stylized initial "B".

Brandon S. Frey, E.I.T.
Western Section
Division of Dam Safety

cc: George B. Wright, P.E., L. Robert Kimball & Associates, Inc.

